

What is claimed is:

1. A light-emitting module comprising:

a light-emitting device having a light-emitting surface and a light-reflecting surface, the light-emitting device emitting light having an output wavelength and an output power from the light-emitting surface;

a first light-receiving device for detecting the output power of the light emitted from the light-emitting surface of the light-emitting device and for outputting a first output corresponding to the output power; and

a wavelength detector comprising an etalon device and a second light-receiving device for outputting a second output corresponding to the output wavelength of the light emitted from the light-emitting surface.

2. The light-emitting module according to claim 1, further comprises a driver for electrically driving the light-emitting device and a package for enclosing the light-emitting device and the driver, the light-emitting device and the driver being disposed side by side configuration in the package.

3. The light-emitting module according to claim 2, further comprises a first beam splitter for splitting the light emitted from the light-emitting device into an output light and a monitoring light,

a second beam splitter for splitting the monitoring light split by the first beam splitter into a first monitoring light for transmitting to the first light-receiving device and a second monitoring light for transmitting to the etalon device, the etalon device transmitting the second monitoring light to the second light-receiving device.

4. The light-emitting module according to claim 3, further comprises  
a Peltier element thermally coupling to the light-emitting device for  
adjusting a temperature thereof, the Peltier element being controlled based  
5 on the second output provided from the second light-receiving device.

5. The light-emitting module according to claim 3, wherein the package  
includes a first, a second and a third regions each arranged in this order, and  
an opening for transmitting the output light, and

10 wherein the third region disposes the driver therein, the second region  
disposes the light-emitting device therein and the first region disposes the  
first and the second light-receiving devices, the etalon devices and the  
second beam splitter therein.

15 6. The light-emitting module according to claim 5, wherein the first  
beam splitter is disposed in the first region.

7. The light-emitting module according to claim 5, wherein the first  
beam splitter is disposed in the opening provided in the package.

20 8. The light-emitting module according to claim 3, wherein the first and  
the second beam splitters are respectively one of a half mirror and a cubed  
beam splitter.

25 9. The light-emitting module according to claim 1, wherein the first and

the second light-receiving devices are semiconductor photodiodes.

10. The light-emitting module according to claim 1, wherein the light-emitting device is a semiconductor laser diode.

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11. The light-emitting module according to claim 1, wherein the light-emitting device is a type of a semiconductor laser diode integrated with an optical modulator.

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12. The light-emitting module according to claim 11, wherein the light-emitting device is a type of a distributed feedback laser diode integrated with a semiconductor electro-absorption device.

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13. The light-emitting module according to claim 11, further comprises a third light-receiving device for detecting light emitted from the light-reflecting surface of the light-emitting device and for generating a third output corresponding to the light emitted from the light-reflecting surface,

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wherein a characteristic of the optical modulator is detected by a comparison between the first output provided from the first light-receiving device and the third output provided from the third light-receiving device.